TRANSACTIONS

OF THE

AMERICAN SOCIETY OF CIVIL ENGINEERS

INDEX

VOLUME 127, PARTS I-V

1962

SUBJECT INDEX, PAGE 83
AUTHOR INDEX, PAGE 111

INTRODUCTION

These subject and author indexes cover all of the papers in Parts I through V of ASCE TRANSACTIONS, Vol. 127, 1962. Also included in the author index are citations to the abstracts of memoirs of deceased members; the authors of the memoirs are not indexed but their names appear in the individual memoir abstracts. In the author index, the abbreviation "Dsc" is used to indicate a discussion.

In this index, a notation such as

II:304:3372

indicates part II, page 304, Transactions Paper 3372. For a memoir abstract

V:51

indicates part V, page 51.

SUBJECT INDEX

ACCIDENTS
"Safety, Reliability and Structural Design," A. M. Freudenthal (with discussion), II:304:3372.

AERATION
"Low Pressure Aeration of Water and Sewage," N. Claes H. Fischerstrom (with discussion), III:75:3297.

AERODYNAMICS
"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.
"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

AERO-SPACE TRANSPORT
"Airplane Performance and the Small Airport," Walter E. Gillfillan, IV:221:3320.
"Airport Design by Economic Analysis," Paul H. Stafford and Martin A. Warskow (with discussion), IV:449:3365.
"Location and Number of Exit Taxiways," Robert Horonjeff, IV:29:3286.
"Runway Roughness Studies in the Aeronautical Field," John C. Houbolt (with discussion), IV:427:3364.

AIRCRAFT
"Airplane Performance and the Small Airport," Walter E. Gillfillan, IV:221:3320.
"Location and Number of Exit Taxiways," Robert Horonjeff, IV:29:3286.
"Research for Survival," Arthur G. Trudeau, V:20:3353.

AIR FLOW
"Low Pressure Aeration of Water and Sewage," N. Claes H. Fischerstrom (with discussion), III:75:3297.

AIRPORTS
"Airplane Performance and the Small Airport," Walter E. Gillfillan, IV:221:3320.
"Airport Design by Economic Analysis," Paul H. Stafford and Martin A. Warskow (with discussion), IV:449:3365.
"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.
"Location and Number of Exit Taxiways," Robert Horonjeff, IV:29:3286.
"Runway Roughness Studies in the Aeronautical Field," John C. Houbolt (with discussion), IV:427:3364.
"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.

AIR TRANSPORT
"Airplane Performance and the Small Airport," Walter E. Gillfillan, IV:221:3320.
"Location and Number of Exit Taxiways," Robert Horonjeff, IV:29:3286.

ALGAE
"Filtration Using Radioactive Algae," Kenneth J. Ives (with discussion), III:372:3355.

ALUMINUM
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.

ALUMINUM *(Continued)*
"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.
"Wind-Induced Vibration in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

AMERICAN SOCIETY OF CIVIL ENGINEERS (Memoirs of members)
See name of member in Author Index.

AMERICAN SOCIETY OF CIVIL ENGINEERS (Addresses)
"The Sky's No Longer the Limit—But . . .," Annual Address at the Conference, Omaha, Nebraska, May 16, 1962, G. Brooks Earnest, V:40:3391.

ARCHES
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406:3384.

ATOMIC BLAST
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352:3312.
"Dynamic Elastic-Plastic Analysis of Structures," Melvin L. Baron, Hans H. Bleich, and Paul Weidlinger (with discussion), I:604:3330.
"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802:3346.
"Uniformly Moving Load on a Layered Half Plane," J. L. Sackman I:823:3347.

BACKWATER
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

BEAMS (General)
"Analysis of Noncoplanar Elastic Rings," D. H. Pletta, W. C. Liessner, and Yen-Ming Yeh, I:776:3345.
"Column Research Council Symposium on Metal Compression Members," Bruce J. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.
"Periods of Framed Buildings for Earthquake Analysis," Mario G. Salvadori and Ewald Heer (with discussion), I:660:3334.
"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.
"Structural Model Analysis by Means of Moiré Fringes," A. J. Durelli and I. M. Daniel (with discussion), II:39:3321.

BEAMS, CONTINUOUS
"Structural Model Analysis by Means of Moiré Fringes," A. J. Durelli and I. M. Daniel (with discussion), II:39:3321.

BEARING CAPACITY
"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.

BREAKWATERS
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.
"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.
"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.

BRIDGES (General)
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

BRIDGES, SUSPENSION
"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.
"Movements of a Cable Due to Changes in Loading," James Michalos and Charles Birnstiel (with discussion), II:267:3368.

BUCKLING
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Stability Considerations in the Design of Steel Columns," Charles E. Massonnet (with discussion), II:525:3385.
"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.
"Stability of Frames in the Presence of Primary Bending Moments," E. F. Masur, I. C. Chang, and L. H. Donnell, I:736:3339.
"Vibrations and Stability of Plates Under Initial Stress," George Herrman and Anthony E. Armenakas (with discussion), I:458:3322.

BUILDINGS
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.
"Periods of Framed Buildings for Earthquake Analysis," Mario G. Salvadori and Ewald Heer (with discussion), I:660:3334.
"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.
"Response of Multi-Story Structures to Earthquake," Glen V. Berg (with discussion), I:705:3338.
"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.

CABLES
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.
"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.

CAISSONS
"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18:3298.

CANALS (General)
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.

CAVITATION
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

CEMENT
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I:1338:3379.

CHANNELS
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32:3287.
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625:3333.

CHANNELS *(Continued)*
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I: 927:3360.
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391: 3371.

CITY PLANNING
"Land Use and Expressways," Fred W. Tuemmler, IV:48:3291.
"Observations on Urban Transportation," Luther Gulick, IV:260:3326.

CLAY
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492:3325.

COLUMNS
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.
"Stability Considerations in the Design of Steel Columns," Charles E. Massonnet (with discussion), II: 525:3385.

COMPUTATION AND COMPUTERS
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.
"Analysis of Structures by Combining Redundants," Peter P. Gillis and Kurt H. Gerstle (with discussion), II:349:3374.
"Bending and Stretching of Laminated Aeolotropic Plates," Yehuda Stavsky, I:1194:3369.
"Design of Arch Dams by Trial Load Method of Analysis," Merlin D. Copen (with discussion), III:236: 3340.
"Digital Computers for Trial-Load Analysis of Arch Dams," L. R. Scrivner (with discussion), III:116: 3302.
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.
"Filtration Using Radioactive Algae," Kenneth J. Ives (with discussion), III,372:3355.
"Movements of a Cable Due to Changes in Loading," James Michalos and Charles Birnstiel (with discussion), II:267:3368.
"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.
"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.
"Response of Multi-Story Structures to Earthquake," Glen V. Berg (with discussion), I:705:3338.
"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.

CONCRETE (General)
"Digital Computers for Trial-Load Analysis of Arch Dams," L. R. Scrivner (with discussion), III:116: 3302.
"Italian Arch Dam Design and Model Confirmation," Guido Oberti (with discussion), II:471:3382.
"Ultimate-Load Theory for Concrete Frame Analysis," A. L. L. Baker (with discussion), II:561:3386.

CONCRETE, PRESTRESSED
"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," Hugh F. Kennison, I:246:3300.

CONCRETE, REINFORCED
"LTS Design of Continuously Reinforced Concrete Pavement," Benjamin F. McCullough and William B. Ledbetter (with discussion), IV: 358:3357.
"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.

CONDUITS
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.

CONSTRUCTION
"Behavior of Beach Fills in New England," Harry S. Perdikis (with discussion), IV:292:3337.
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.
"Design and Stability Considerations for Unique Pier," James Michalos and David P. Billington (with discussion), IV:396:3358.
"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18: 3298.
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I: 1338:3379.
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492:3325.

CORROSION
"Cathodic Protection of Marine Terminal Facilities," Joseph Milano, IV:329:3348.
"Fundamentals of Cathodic Protection," Jack W. Pierce, IV:114: 3307.
"Investigation on the Corrosive Behavior of Waters," Werner Stumm (with discussion), III:1:3280.
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.

COSTS, AIRPORT
"Airport Design by Economic Analysis," Paul H. Stafford and Martin A. Warskow (with discussion), IV:449:3365.

COSTS, CONSTRUCTION
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.

COSTS, DREDGING
"Latest Dredging Practice," Ole P. Erickson (with discussion), IV:1: 3281.

COSTS, HIGHWAY AND ROAD
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.

COSTS, PIPELINE
"Fundamentals of Cathodic Protection," Jack W. Pierce, IV:114: 3307.

COSTS, POWER
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.
"Studies for the Lower Monumental Power Plant," Benjamin F. Smith, III:153:3318.

COSTS, RESERVOIR
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.

COSTS, SEWAGE DISPOSAL
"Removal of Floatables from Digested Sludge," R. J. Theroux, C. H. Lawrance, and N. B. Hume, III: 172:3324.

COSTS, TRANSPORTATION
"The Civil Engineer and Urban Transportation," Jack B. Blackburn, IV:80:3299.

COSTS, WATER
"Methods of Applying Irrigation Water," Paul H. Berg (with discussion), III:61:3293.

DAMS (General)
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.
"Measurement of Displacement and Deformation by Geodetic Methods," F. Kobold, IV:163:3311.
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.
"Model and Prototype Research on Fish Ladders," Berton M. MacLean (with discussion), III:221:3359.
"Studies for the Lower Monumental Power Plant," Benjamin F. Smith, III:153:3318.
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I: 1338:3379.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.

DAMS, ARCH
"Design of Arch Dams by Trail Load Method of Analysis," Merlin D. Copen (with discussion), III:236: 3340.
"Digital Computers for Trial-Load Analysis of Arch Dams," L. R. Scrivner (with discussion), III:116: 3302.
"Italian Arch Dam Design and Model Confirmation," Guida Oberti (with discussion), II:471:3382.

DAMS, EARTH
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492:3325.

DAMS, MASONRY AND CONCRETE
"Digital Computers for Trial-Load Analysis of Arch Dams," L. R. Scrivner (with discussion), III:116: 3302.

DRAINAGE
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.
"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32: 3287.
"Method for Estimating Consumptive Use of Water for Agriculture," Wendell C. Munson (with discussion), III:200:3331.
"Methods of Applying Irrigation Water," Paul H. Berg (with discussion), III:61:3293.
"Relation of Intake Rate to Length of Run in Surface Irrigation," A. Alvin Bishop (with discussion), III: 282:3344.
"Some Legal Aspects of Sedimentation," C. E. Busby (with discussion), I:1007:3361.
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391: 3371.
"Water Balance Recorder," Hans C. Aslyng and Knud J. Kristensen (with discussion), III:132:3305.
"Weather Modification (Symposium)," Robert D. Elliott; Wallace E. Howell, III:327:3354.

DREDGES AND DREDGING
"Latest Dredging Practice," Ole P. Erickson (with discussion), IV:1: 3281.
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75: 3288.
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492:3325.

EARTHQUAKES
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.
"Periods of Framed Buildings for Earthquake Analysis," Mario G. Salvadori and Ewald Heer (with discussion), I:660:3334.
"Response of Multi-Story Structures to Earthquake," Glen V. Berg (with discussion), I:705:3338.

EARTHWORK
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492;3325.

ECONOMICS
"Airport Design by Economic Analysis," Paul H. Stafford and Martin A. Warskow (with discussion), IV:449:3365.
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.
"Economics of River Bank Stabilization," Charles Senour (with discussion), IV:346:3356.
"Observations on Urban Transportation," Luther Gulick, IV:260:3326.
"Weather Modification (Symposium)," Robert D. Elliott; Wallace E. Howel, III:327:3354.

EDUCATION
"Meaning of the Professional License to Engineers," Donald Kowtko, V:1:3352.

ELASTICITY
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.
"Analysis of Structures by Combining Redundants," Peter P. Gillis and Kurt H. Gerstle (with discussion), II:349:3374.
"Dynamic Elastic-Plastic Analysis of Structures," Melvin L. Baron, Hans H. Bleich and Paul Weidlinger (with discussion), I:604:3330.
"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802: 3346.
"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I: 863:3351.
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.
"Ultimate-Load Theory for Concrete Frame Analysis," A. L. L. Baker (with discussion), II:561:3386.

EMPLOYEES AND EMPLOYMENT
"Meaning of the Professional License to Engineers," Donald Kowtko, V:1:3352.

ENGINEERING MECHANICS
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.
"Analysis of Noncoplanar Elastic Rings," D. H. Pletta, W. C. Liessner, and Yen-Ming Yeh, I:776:3345.
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352: 3312.

ENGINEERING MECHANICS *(Continued)*

"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.

"Bending and Stretching of Laminated Aeolotropic Plates," Yehuda Stavsky, I:1194:3369.

"Dynamic Elastic-Plastic Analysis of Structures," Melvin L. Baron, Hans H. Bleich, and Paul Weidlinger (with discussion), I:604:3330.

"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.

"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802: 3346.

"Latest Dredging Practice," Ole P. Erickson (with discussion), IV:1: 3281.

"Moiré Fringes as a Means of Analyzing Strains," C. A. Sciammarella and A. J. Durelli (with discussion), I:582:3329.

"Range of Yield Condition in Ideal Plasticity," R. M. Haythornthwaite, I:1252:3377.

"Response of Multi-Story Structures to Earthquake," Glen V. Berg (with discussion), I:705:3338.

"Stability of Frames in the Presence of Primary Bending Moments," E. F. Masur, I. C. Chang, and L. H. Donnell, I:736:3339.

"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.

"Uniformly Moving Load on a Layered Half Plane," J. L. Sackman, I:823:3347.

"Vibrations and Stability of Plates Under Initial Stress," George Herrmann and Anthony E. Armenakas (with discussion), I:458:3322.

"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

"Wind Stresses in Domes," P. Gondikas and Mario G. Salvadori (with discussion), I:838:3350.

ENGINEERS AND ENGINEERING

"Meaning of the Professional License to Engineers," Donald Kowtko, V:1:3352.

"The Sky's No Longer the Limit—But . . .," Annual Address at the Conference, Omaha, Nebraska, May 16, 1962, G. Brooks Earnest, V:40: 3391.

EROSION

"Behavior of Beach Fills in New England," Harry S. Perdikis (with discussion), IV:292:3337.

"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.

"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.

"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

FAILURES (General)

"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.

FAILURES, BRIDGE

"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.

FILTERS AND FILTRATION

"Adhesion in Filters," Vladimir Mackrle and Svatopluk Mackrle, III: 266:3342.

"Filtration Using Radioactive Algae," Kenneth J. Ives (with discussion), III:372:3355.

"Seepage Requirements of Filters and Pervious Bases," Harry R. Cedergren (with discussion), I:1090: 3363.

FLOODS (General)

"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.

"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625: 3333.

"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

FLUMES

"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I: 927:3360.

FOUNDATIONS (General)

"Design and Stability Considerations for Unique Pier," James Michalos and David P. Billington (with discussion), IV:396:3358.

"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I: 863:3351.

"Generalized Solutions for Laterally Loaded Piles," Hudson Matlock and Lymon C. Reese (with discussion), I:1220:3370.

"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270;3378.

"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18: 3298.

"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.

"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

"Seepage Requirements of Filters and Pervious Bases," Harry R. Cedergren (with discussion), I:1090: 3363.

"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy: W. F. Swiger (with discussion), I: 1338:3379.

FOUNDATIONS, AIRPORT

"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.

FOUNDATIONS, DAM

"Seepage Requirements of Filters and Pervious Bases," Harry R. Cedergren (with discussion), I:1090: 3363.

"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I: 1338:3379.

"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492:3325.

FOUNDATIONS, HIGHWAY AND ROAD

"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.

FRAMES

"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.

"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston, Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.

"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.

"Periods of Framed Buildings for Earthquake Analysis," Mario G. Salvadori and Ewald Heer (with discussion), I:660:3334.

"Stability of Frames in the Presence of Primary Bending Moments," E. F. Masur, I. C. Chang, and L. H. Donnell, I:736:3339.

"Structural Model Analysis by Means of Moiré Fringes," A. J. Durelli and I. M. Daniel (with discussion), II:39:3321.

FRAMES *(Continued)*
"Ultimate-Load Theory for Concrete Frame Analysis," A. L. L. Baker (with discussion), II:561:3386.

FRICTION
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.

FRICTION COEFFICIENTS, FLUID
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I: 927:3360.

GAGES (General)
"Water Balance Recorder," Hans C. Aslyng and Knud J. Kristensen (with discussion), III:132:3305.

GAGES, PRESSURE
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I:284:3304.
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.

GAGES, STRAIN
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.

GAGES, STREAM
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75: 3288.

GEOLOGY
"Hydrogeologic Nature of Streamflow on Small Watersheds," J. L. McGuinness, L. L. Harrold, and C. R. Amerman, I:763:3343.
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I: 492:3325.

GIRDERS
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.

GRAPHICAL CHARTS
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.

GROUND WATER
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I: 284:3304.
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32: 3287.
"Relation of Intake Rate to Length of Run in Surface Irrigation," A. Alvin Bishop (with discussion), III: 282:3344.
"Unsteady Flow of Ground Water into a Surface Reservoir," William Haushild and Gordon Kruse (with discussion), I:408:3317.

GROUTING
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I: 1338:3379.

HARBORS (General)
"Cathodic Protection of Marine Terminal Facilities," Joseph Milano, IV:329:3348.
"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.
"Economics of River Bank Stabilization," Charles Senour (with discussion), IV:346:3356.

"Hurricane Winds for Design Along the New England Coast," C. S. Gilman and V. A. Myers, IV:59: 3295.
"Latest Dredging Practice," Ole P. Erickson (with discussion), IV:1: 3281.
"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.
"Pneumatic Barrier Against Salt Water Intrusion," Ian Larsen (with discussion), IV:475:3172.
"Theory of Wave Agitation in a Harbor," Bernard Le Méhauté, I: 364:3313.

HARBORS (Geographical)
CALIFORNIA
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.
HUDSON RIVER
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275:3332.
NEW ENGLAND
"Behavior of Beach Fills in New England," Harry S. Perdikis (with discussion), IV:292:3337.
NEW YORK
"Design and Stability Considerations for Unique Pier," James Michalos and David P. Billington (with discussion), IV:396:3358.
TEXAS
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.

HIGHWAYS AND ROADS (General)
"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.
"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.
"Land Use and Expressways," Fred W. Tuemmler, IV:48:3291.
"LTS Design of Continuously Reinforced Concrete Pavement," Benjamin F. McCullough and William B. Ledbetter (with discussion), IV:358: 3357.
"The Civil Engineer and Urban Transportation," Jack B. Blackburn, IV:80:3299.

HYDRAULICS
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I: 284:3304.
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.
"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.
"Free Surface Flow in Homogeneous Porous Medium," Roger J. M. DeWiest (with discussion), I:1045: 3362.
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.
"Hydraulics of Southwest Pass, Mississippi River," Chester A. Peyronnin, Jr., I:752:3341.
"Hydrogeologic Nature of Streamflow on Small Watersheds," J. L. McGuinness, L. L. Harrold, and C. R. Amerman, I:763:3343.
"Interfacial Mixing in Stratified Flow," Enzo Oscar Macagno and Hunter Rouse, I:102:3289.
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625: 3333.
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75: 3288.

HYDRAULICS *(Continued)*
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I: 927:3360.
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.
"Seepage Requirements of Filters and Pervious Bases," Harry R. Cedergren (with discussion), I:1090; 3363.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Some Legal Aspects of Sedimentation," C. E. Busby (with discussion), I:1007:3361.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," Hugh F. Kennison, I:246:3300.
"Theory of Wave Agitation in a Harbor," Bernard Le Méhauté, I: 364:3313.
"Unsteady Flow of Ground Water into a Surface Reservoir," William Haushild and Gordon Kruse (with discussion), I:408:3317.
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391: 3371.
"Water Eddy Forces on Oscillating Cylinders," Alan D. K. Laird, Charles A. Johnson, and Robert W. Walker (with discussion), I:335:3310.

HYDRODYNAMICS
"Adhesion in Filters," Vladimir Mackrle and Svatopluk Mackrle, III: 266:3342.
"Interfacial Mixing in Stratified Flow," Enzo Oscar Macagno and Hunter Rouse, I:102:3289.
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.
"Water Eddy Forces on Oscillating Cylinders," Alan D. K. Laird, Charles A. Johnson, and Robert W. Walker (with discussion), I:335:3310.

HYDROGRAPHS
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625: 3333.

HYDROLOGY
"Hydrogeologic Nature of Streamflow on Small Watersheds," J. L. McGuinness, L. L. Harrold, and C. R. Amerman, I:763:3343.
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625: 3333.
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.

ICE
"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.

IMPACT
"Design and Stability Considerations for Unique Pier," James Michalos and David P. Billington (with discussion), IV:396:3358.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.

"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.

IRRIGATION (General)
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32:3287.
"Method for Estimating Consumptive Use of Water for Agriculture," Wendell C. Munson (with discussion), III:200:3331.
"Methods of Applying Irrigation Water," Paul H. Berg (with discussion), III:61:3293.
"Relation of Intake Rate to Length of Run in Surface Irrigation," A. Alvin Bishop (with discussion), III:282:3344.
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391:3371.
"Water Balance Recorder," Hans C. Aslyng and Knud J. Kristensen (with discussion), III:132:3305.
"Weather Modification (Symposium)," Robert D. Elliott; Wallace E. Howell, III:327:3354.

JOINTS (General)
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.

LABORATORIES
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391:3371.

LAKES (Geographical)
LAKE MARACAIBO
"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18:3298.

LAW
"Some Legal Aspects of Sedimentation," C. E. Busby (with discussion), I:1007:3361.

LOAD
"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.
"Design of Arch Dams by Trial Load Method of Analysis," Merlin D. Copen (with discussion), III:236:3340.
"Movements of a Cable Due to Changes in Loading," James Michalos and Charles Birnstiel (with discussion), II:267:3368.
"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.
"Uniformly Moving Load on a Layered Half Plane," J. L. Sackman, I:823:3347.

LOCKS
"Model and Prototype Research on Fish Ladders," Berton M. MacLean (with discussion), III:221:3359.

MAPS AND MAPPING (General)
"Measurement of Displacement and Deformation by Geodetic Methods," F. Kobold, IV:163:3311.

MATERIALS OF CONSTRUCTION
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352:3312.
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.

MATHEMATICS
"Adhesion in Filters," Vladimir Mackrle and Svatopluk Mackrle, III: 266:3342.
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.
"Analysis of Noncoplanar Elastic Rings," D. H. Pletta, W. C. Liessner, and Yen-Ming Yeh, I:776:3345.
"Analysis of Structures by Combining Redundants," Peter P. Gillis and Kurt H. Gerstle (with discussion), II:349:3374.
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I: 284:3304.
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352: 3312.
"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.
"Bending and Stretching of Laminated Aeolotropic Plates," Yehuda Stavsky, I:1194:3369.
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.
"Design of Arch Dams by Trial Load Method of Analysis," Merlin D. Copen (with discussion), III:236: 3340.
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.
"Dynamic Elastic-Plastic Analysis of Structures," Melvin L. Baron, Hans H. Bleich, and Paul Weidlinger (with discussion), I:604:3330.
"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802: 3346.
"Fisheries Statistics in Evaluating Claims of Pollution," Roger Tollefson, III:140:3315.
"Free Surface Flow in Homogeneous Porous Medium," Roger J. M. DeWiest (with discussion), I:1045: 3362.
"Generalized Solutions for Laterally Loaded Piles," Hudson Matlock and Lymon C. Reese (with discussion), I:1220:3370.
"Interfacial Mixing in Stratified Flow," Enzo Oscar Macagno and Hunter Rouse, I:102:3289.
"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.
"Pneumatic Barrier Against Salt Water Intrusion," Ian Larsen (with discussion), IV:475:3172.
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.
"Safety, Reliability and Structural Design," A. M. Freudenthal (with discussion), II:304:3372.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.
"Theory of Wave Agitation in a Harbor," Bernard Le Méhauté, I: 364:3313.
"Vibrations and Stability of Plates Under Initial Stress," George Herrmann and Anthony E. Armenakas (with discussion), I:458:3322.

METEOROLOGY
"Hurricane Winds for Design Along the New England Coast," C. S. Gilman and V. A. Myers, IV:59: 3295.
"Weather Modification (Symposium)," Robert D. Elliott; Wallace E. Howell, III:327:3354.

METERS AND METERING
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.

MODELS (General)
"Blending Natural Earth Deposits for Least Cost," J. B. Ritter and L. R. Shaffer, II:54:3328.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.
"Location and Number of Exit Taxiways," Robert Horonjeff, IV:29:3286.

MODELS, HYDRAULIC
"Free Surface Flow in Homogeneous Porous Medium," Roger J. M. DeWiest (with discussion), I:1045:3362.
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.
"Model and Prototype Research on Fish Ladders," Berton M. MacLean (with discussion), III:221:3359.
"Pneumatic Barrier Against Salt Water Intrusion," Ian Larsen (with discussion), IV:475:3172.
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I:927:3360.
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275:3332.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391:3371.
"Water Eddy Forces on Oscillating Cylinders," Alan D. K. Laird, Charles A. Johnson, and Robert W. Walker (with discussion), I:335:3310.

MODELS, STRUCTURAL
"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.
"Design of Arch Dams by Trial Load Method of Analysis," Merlin D. Copen (with discussion), III:236:3340.
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.
"Italian Arch Dam Design and Model Confirmation," Guido Oberti (with discussion), II:471:3382.
"Moiré Fringes as a Means of Analyzing Strains," C. A. Sciammarella and A. J. Durelli (with discussion), I:582:3329.
"Structural Model Analysis by Means of Moiré Fringes," A. J. Durelli and I. M. Daniel (with discussion), II:39:3321.
"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

MOMENTS
"Stability of Frames in the Presence of Primary Bending Moments," E. F. Masur, I. C. Chang, and L. H. Donnell, I:736:3339.
"Structural Model Analysis by Means of Moiré Fringes," A. J. Durelli and I. M. Daniel (with discussion), II:39:3321.

NOMOGRAPHS
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston, Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.

NOMOGRAPHS *(Continued)*
"Method for Estimating Consumptive Use of Water for Agriculture," Wendell C. Munson (with discussion), III:200:3331.
"Relation of Intake Rate to Length of Run in Surface Irrigation," A. Alvin Bishop (with discussion), III: 282:3344.

PAVEMENT AND PAVING (General)
"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.
"Location and Number of Exit Taxiways," Robert Horonjeff, IV:29: 3286.
"Runway Roughness Studies in the Aeronautical Field," John C. Houbolt (with discussion), IV:427:3364.

PAVEMENT AND PAVING, CONCRETE
"LTS Design of Continuously Reinforced Concrete Pavement," Benjamin F. McCullough and William B. Ledbetter (with discussion), IV: 358:3357.

PENSTOCKS
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.

PETROLEUM
"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18: 3298.

PILES AND PILE DRIVING
"Cathodic Protection of Marine Terminal Facilities," Joseph Milano, IV:329:3348.
"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I:863: 3351.
"Generalized Solutions for Laterally Loaded Piles," Hudson Matlock and Lymon C. Reese (with discussion), I:1220:3370.
"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18: 3298.
"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.
"Water Eddy Forces on Oscillating Cylinders," Alan D. K. Laird, Charles A. Johnson, and Robert W. Walker (with discussion), I:335:3310.

PIPELINES
"Fundamentals of Cathodic Protection," Jack W. Pierce, IV:114: 3307.
"Methods of Applying Irrigation Water," Paul H. Berg (with discussion), III:61:3293.
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.

PIPES AND PIPING
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," Hugh F. Kennison, I:246:3300.

PLASTICITY
"Dynamic Elastic-Plastic Analysis of Structures," Melvin L. Baron, Hans H. Bleich, and Paul Weidlinger (with discussion), I:604:3330.
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.
"Range of Yield Condition in Ideal Plasticity," R. M. Haythornthwaite, I:1252:3377.

"Stability Considerations in the Design of Steel Columns," Charles E. Massonnet (with discussion), II: 525:3385.

"Ultimate-Load Theory for Concrete Frame Analysis," A. L. L. Baker (with discussion), II:561:3386.

PLATES

"Bearing Capacity of Floating Ice Sheets," G. G. Meyerhof (with discussion), I:524:3327.

"Bending and Stretching of Laminated Aeolotropic Plates," Yehuda Stavsky, I:1194:3369.

"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.

"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.

"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.

"Vibrations and Stability of Plates Under Initial Stress," George Herrmann and Anthony E. Armenakas (with discussion), I:458:3322.

POLLUTION, OCEAN

"Removal of Floatables from Digested Sludge," R. J. Theroux, C. H. Lawrance, and N. B. Hume, III: 172:3324.

"Sanitary Considerations of Five-Mile Ocean Outfall," Charles H. Lawrance, III:294:3349.

POLLUTION, STREAM

"Chlorination of Mixed Sewage and Storm Water," Thomas R. Camp (with discussion), III:452:3335.

"Fisheries Statistics in Evaluating Claims of Pollutions," Roger Tollefson, III:140:3315.

"Metabolism of Organic Sulfonates by Activated Sludge," James M. Symons and Luis A. del Valle-Rivera, III:43:3290.

POWER (General)

"Design of Arch Dams by Trial Load Method of Analysis," Merlin D. Copen (with discussion), III:236: 3340.

"Digital Computers for Trial-Load Analysis of Arch Dams," L. R. Scrivner (with discussion), III:116: 3302.

"Italian Arch Dam Design and Model Confirmation," Guido Oberti (with discussion), II:471:3382.

"Model and Prototype Research on Fish Ladders," Berton M. MacLean (with discussion), III:221:3359.

"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.

"Studies for the Lower Monumental Power Plant," Benjamin F. Smith, III:153:3318.

POWER (Geographical)

ITALY

"Italian Arch Dam Design and Model Confirmation," Guido Oberti (with discussion), II:471:3382.

WASHINGTON

"Studies for the Lower Monumental Power Plant," Benjamin F. Smith Smith, III:153:3318.

PROBABILITY, THEORY OF

"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.

"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.

"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.

"Safety, Reliability and Structural Design," A. M. Freudenthal (with discussion), II:304:3372.

PROFESSIONAL PRACTICE
"Meaning of the Professional License to Engineers," Donald Kowtko, V:1:3352.
"Research for Survival," Arthur G. Trudeau, V:20:3353.

PUBLIC HEALTH
"Chlorination of Mixed Sewage and Storm Water," Thomas R. Camp (with discussion), III:452:3335.

PUMPS AND PUMPING
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I:284:3304.
"Latest Dredging Practice," Ole P. Erickson (with discussion), IV:1:3281.

RADIOACTIVITY
"Filtration Using Radioactive Algae," Kenneth J. Ives (with discussion), III:372:3355.

RAINFALL (General)
"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.
"Methods of Applying Irrigation Water," Paul H. Berg (with discussion), III:61:3293.
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625:3333.
"Water Balance Recorder," Hans C. Aslyng and Knud J. Kristensen (with discussion), III:132:3305.
"Weather Modification (Symposium)," Robert D. Elliott; Wallace E. Howell, III:327:3354.

RESEARCH
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.
"Metabolism of Orgainc Sulfonates by Activated Sludge," James M. Symons and Luis A. del Valle-Rivera, III:43:3290.
"Model and Prototype Research on Fish Ladders," Berton M. MacLean (with discussion), III:221:3359.
"Removal of Floatables from Digested Sludge," R. J. Theroux, C. H. Lawrance, and N. B. Hume, III:172:3324.
"Research for Survival," Arthur G. Trudeau, V:20:3353.
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I:1338:3379.

RESERVOIRS (General)
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.
"Unsteady Flow of Ground Water into a Surface Reservoir," William Haushild and Gordon Kruse (with discussion), I:408:3317.
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.

RESERVOIRS, MULTI-PURPOSE
"Queuing Theory and Simulation in Reservoir Design," Myron B. Fiering, I:1114:3367.

RIVERS (General)
"Economics of River Bank Stabilization," Charles Senour (with discussion), IV:346:3356.
"Fisheries Statistics in Evaluating Claims of Pollutions," Roger Tollefson, III:140:3315.
"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.
"Pneumatic Barrier Against Salt Water Intrusion," Ian Larsen (with discussion), IV:475:3172.
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.

RIVERS (Geographical)
COLUMBIA RIVER
"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.
"Model and Prototype Research on Fish Ladders," Berton M. MacLean (with discussion), III:221:3359.
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75:3288.
MISSISSIPPI RIVER
"Hydraulics of Southwest Pass, Mississippi River," Chester A. Peyronnin, Jr., I:752:3341.

RUNOFF (General)
"Forecasting River Runoff by Coastal Flow Index," David M. Rockwood and Carlton E. Jencks (with discussion), I:129:3292.
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625:3333.

SAFETY
"Safety, Reliability and Structural Design," A. M. Freudenthal (with discussion), II:304:3372.

SAND
"Attentuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352:3312.
"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I:863:3351.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391:3371.

SANITARY ENGINEERING
"Adhesion in Filters," Vladimir Mackrle and Svatopluk Mackrle, III:266:3342.
"Chlorination of Mixed Sewage and Storm Water," Thomas R. Camp (with discussion), III:452:3335.
"Filtration Using Radioactive Algae," Kenneth J. Ives (with discussion), III:372:3355.
"Fisheries Statistics in Evaluating Claims of Pollutions," Roger Tollefson, III:140:3315.
"Investigation on the Corrosive Behavior of Waters," Werner Stumm (with discussion), III:1:3280.
"Low Pressure Aeration of Water and Sewage," N. Claes H. Fischerstrom (with discussion), III:75:3297.
"Metabolism of Organic Sulfonates by Activated Sludge," James M. Symons and Luis A. del Valle-Rivera, III:43:3290.
"Removal of Floatables from Digested Sludge," R. J. Theroux, C. H. Lawrance, and N. B. Hume, III:172:3324.
"Sanitary Considerations of Five-Mile Ocean Outfall," Charles H. Lawrance, III:294:3349.

SEDIMENT AND SEDIMENTATION
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.

SEDIMENT AND SEDIMENTATION *(Continued)*
"Hydraulics of Southwest Pass, Mississippi River," Chester A. Peyronnin, Jr., I:752:3341.
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I: 927:3360.
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275: 3332.
"Some Legal Aspects of Sedimentation," C. E. Busby (with discussion), I:1007:3361.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391: 3371.

SEEPAGE
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32: 3287.
"Seepage Requirements of Filters and Pervious Bases," Harry R. Cedergren (with discussion), I:1090: 3363.
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I: 1338:3379.
"Variable Head Technique for Seepage Meters," Herman Bouwer (with discussion), III:434:3376.

SEWAGE DISPOSAL (General)
"Chlorination of Mixed Sewage and Storm Water," Thomas R. Camp (with discussion), III:452:3335.
"Low Pressure Aeration of Water and Sewage," N. Claes H. Fischerstrom (with discussion), III:75:3297.

SEWAGE SLUDGE
"Metabolism of Organic Sulfonates by Activated Sludge," James M. Symons and Luis A. del Valle-Rivera, III:43:3290.
"Removal of Floatables from Digested Sludge," R. J. Theroux, C. H. Lawrance, and N. B. Hume, III: 172:3324.

SEWERS (Geographical)
CALIFORNIA
"Removal of Floatables from Digested Sludge," R. J. Theroux, C. H. Lawrance, and N. B. Hume, III: 172:3324.
"Sanitary Considerations of Five-Mile Ocean Outfall," Charles H. Lawrance, III:294:3349.

SHEAR
"Bending and Stretching of Laminated Aeolotropic Plates," Yehuda Stavsky, I:1194:3369.
"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I:863: 3351.
"Interfacial Mixing in Stratified Flow," Enzo Oscar Macagno and Hunter Rouse, I:102:3289.
"Periods of Framed Buildings for Earthquake Analysis," Mario G. Salvadori and Ewald Heer (with discussion), I:660:3334.
"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.

SHELL STRUCTURES
"Wind Stresses in Domes," P. Gondikas and Mario G. Salvadori (with discussion), I:838:3350.

SHORES AND SHORE PROTECTION
"Behavior of Beach Fills in New England," Harry S. Perdikis (with discussion), IV:292:3337.
"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.
"Economics of River Bank Stabilization," Charles Senour (with discussion), IV:346:3356.

"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.

SILT AND SILTING (General)
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.
"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.

SILT AND SILTING, CHANNEL
"Hydraulics of Southwest Pass, Mississippi River," Chester A. Peyronnin, Jr., I:752:3341.
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275:3332.

SOIL MECHANICS
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352:3312.
"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.
"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I:863:3351.
"Generalized Solutions for Laterally Loaded Piles," Hudson Matlock and Lymon C. Reese (with discussion), I:1220:3370.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.
"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.
"Range of Yield Condition in Ideal Plasticity," R. M. Haythornthwaite, I:1252:3377.
"Seepage Requirements of Filters and Pervious Bases," Harry R. Cedergren (with discussion), I:1090:3363.
"Symposium on Grouting," Raymond E. Davis; Thomas B. Kennedy; W. F. Swiger (with discussion), I:1338:3379.
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I:492:3325.

SPILLWAYS (General)
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.

SPILLWAYS (Geographical)
KANSAS
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," K. S. Lane and R. G. Fehrman (with discussion), I:492:3325.

STEEL
"Cathodic Protection of Marine Terminal Facilities," Joseph Milano, IV:329:3348.
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.
"Stability Considerations in the Design of Steel Columns," Charles E. Massonnet (with discussion), II:525:3385.
"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.
"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," Hugh F. Kennison, I:246:3300.

STRESS AND STRAIN
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352:3312.

STRESS AND STRAIN *(Continued)*
"Bending and Stretching of Laminated Aeolotropic Plates," Yehuda Stavsky, I:1194:3369.
"Digital Computers for Trial-Load Analysis of Arch Dams," L. R. Scrivner (with discussion), III:116: 3302.
"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.
"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802:3346.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.
"LTS Design of Continuously Reinforced Concrete Pavement," Benjamin F. McCullough and William B. Ledbetter (with discussuon), IV: 358:3357.
"Moiré Fringes as a Means of Analyzing Strains," C. A. Sciammarella and A. J. Durelli (with discussion), I:582:3329.
"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.
"Pile-Driving Analysis by the Wave Equation," E. A. L. Smith (with discussion), I:1145:3306.
"Range of Yield Condition in Ideal Plasticity," R. M. Haythornthwaite, I:1252:3377.
"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," Hugh F. Kennison, I:246:3300.
"Ultimate-Load Theory for Concrete Frame Analysis," A. L. L. Baker (with discussion), II:561:3386.
"Uniformly Moving Load on a Layered Half Plane," J. L. Sackman, I:823:3347.
"Vibrations and Stability of Plates Under Initial Stress," George Herrmann and Anthony E. Armenakas (with discussion), I:458:3322.
"Wind Stresses in Domes," P. Gondikas and Mario G. Salvadori (with discussion), I:838:3350.

STRUCTURAL DYNAMICS
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.

STRUCTURAL ENGINEERING
"A Method of Computation for Structural Dynamics," Nathan M. Newmark (with discussion), I:1406: 3384.
"Analysis of Noncoplanar Elastic Rings," D. H. Pletta, W. C. Liesner, and Yen-Ming Yeh, I:776:3345.
"Analysis of Structures by Combining Redundants," Peter P. Gillis and Kurt H. Gerstle (with discussion), II:349:3374.
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.
"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.
"Dynamic Elastic-Plastic Analysis of Structures," Melvin L. Baron, Hans H. Bleich, and Paul Weidlinger (with discussion), I:604:3330.
"Dynamic Response of Elasto-Plastic Frames," Joseph Penzien (with discussion), II:1:3284.

"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802: 3346.

"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.

"Italian Arch Dam Design and Model Confirmation," Guido Oberti (with discussion), II:471:3382.

"Movements of a Cable Due to Changes in Loading," James Michalos and Charles Birnstiel (with discussion), II:267:3368.

"New Aspects Concerning Inelastic Instability of Steel Structures," Bruno Thürlimann, II:448:3381.

"Periods of Framed Buildings for Earthquake Analysis," Mario G. Salvadori and Ewald Heer (with discussion), I:660:3334.

"Plastic Method of Designing Steel Structures," John Fleetwood Baker (with discussion), II:597:3387.

"Recent Trends in Ultimate Strength Design," Phil M. Ferguson (with discussion), II:324:3373.

"Response of Multi-Story Structures to Earthquake," Glen V. Berg (with discussion), I:705:3338.

"Safety, Reliability and Structural Design," A. M. Freudenthal (with discussion), II:304:3372.

"Stability Considerations in the Design of Steel Columns," Charles E. Massonnet (with discussion), II: 525:3385.

"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with dission), II:420:3380.

"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.

"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.

"Structural Model Analysis by Means of Moiré Fringes," A. J. Durelli and I. M. Daniel (with discussion), II:39:3321.

"Ultimate-Load Theory for Concrete Frame Analysis," A. L. L. Baker (with discussion), II:561:3386.

"Uniformly Moving Load on a Layered Half Plane," J. L. Sackman, I:823:3347.

"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.

"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

"Wind Stresses in Domes," P. Gondikas and Mario G. Salvadori (with discussion), I:838:3350.

SURVEYING

"Measurement of Displacement and Deformation by Geodetic Methods," F. Kobold, IV:163:3311.

TESTS AND TESTING

"Aquifer Tests of Partially Penetrating Wells," Mahdi S. Hantush, I:284:3304.

"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Rober L. Ketter (with discussion), II:77:3366.

"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.

"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.

"Free Surface Flow in Homogeneous Porous Medium," Roger J. M. DeWiest (with discussion), I:1045: 3362.

"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.

"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.

TESTS AND TESTING *(Continued)*
"Interfacial Mixing in Stratified Flow," Enzo Oscar Macagno and Hunter Rouse, I:102:3289.
"Investigation on the Corrosive Behavior of Waters," Werner Stumm (with discussion), III:1:3280.
"Italian Arch Dam Design and Model Confirmation," Guido Oberti (with discussion), II:471:3382.
"Mechanics of Washout of an Erodible Fuse Plug," E. Roy Tinney and H. Y. Hsu, I:31:3283.
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481:3390.
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I:927:3360.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Stability Considerations in the Design of Steel Plate Girders," Charles E. Massonnet (with discussion), II:420:3380.
"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," Hugh F. Kennison, I:246:3300.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391:3371.
"Water Eddy Forces on Oscillating Cylinders," Alan D. K. Laird, Charles A. Johnson, and Robert W. Walker (with discussion), I:335:3310.
"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

TIDES
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75:3288.
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275:3332.

TIMBER
"Marine Foundation Construction in Oil Fields," S. J. Mathis, II:18:3298.

TOWERS
"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.

TRAFFIC, AIRPORT
"Airplane Performance and the Small Airport," Walter E. Gillfillan, IV:221:3320.

TRANSPORTATION
"Airplane Performance and the Small Airport," Walter E. Gillfillan, IV:221:3320.
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.
"Land Use and Expressways," Fred W. Tuemmler, IV:48:3291.
"Observations on Urban Transportation," Luther Gulick, IV:260:3326.
"The Civil Engineer and Urban Transportation," Jack B. Blackburn, IV:80:3299.

TRIANGULATION
"Measurement of Displacement and Deformation by Geodetic Methods," F. Kobold, IV:163:3311.

TRUSSES (General)
"Analysis of Structures by Combining Redundants," Peter P. Gillis and Kurt H. Gerstle (with discussion), II:349:3374.

TRUSSES, STIFFENING
"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.

TURBINES, WATER
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481:3390.
"Studies for the Lower Monumental Power Plant," Benjamin F. Smith, III:153:3318.

TURBULENCE
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.
"Interfacial Mixing in Stratified Flow," Enzo Oscar Macagno and Hunter Rouse, I:102:3289.
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.

VALVES
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.

VIBRATION
"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.
"Foundation Vibrations," F. E. Richart, Jr. (with discussion), I:863:3351.
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.
"Response of Multi-Story Structures to Earthquake," Glen V. Berg (with discussion), I:705:3338.
"Static and Dynamic Analysis of Guy Cables," Donald L. Dean (with discussion), II:382:3375.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.
"Vibrations and Stability of Plates Under Initial Stress," George Herrmann and Anthony E. Armenakas (with discussion), I:458:3322.
"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.

WATER, CONSUMPTIVE USE OF
"Method for Estimating Consumptive Use of Water for Agriculture," Wendell C. Munson (with discussion), III:200:3331.

WATER, FLOW OF (General)
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I:284:3304.
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.
"Free Surface Flow in Homogeneous Porous Medium," Roger J. M. DeWiest (with discussion), I:1045:3362.
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," G. L. Beichley and A. J. Peterka, I:210:3296.
"Hydrogeologic Nature of Streamflow on Small Watersheds," J. L. McGuinness, L. L. Harrold, and C. R. Amerman, I:763:3343.
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32:3287.

WATER, FLOW OF (General) *(Continued)*
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75:3288.
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275:3332.
"Unsteady Flow of Ground Water into a Surface Reservoir," William Haushild and Gordon Kruse (with discussion), I:408:3317.
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.

WATER, FLOW OF, IN OPEN CHANNELS
"Resistance to Flow in Alluvial Channels," Daryl B. Simons and E. V. Richardson (with discussion), I:927:3360.
"Scour at Bridge Crossings," Emmett M. Laursen (with discussion), I:166:3294.
"Vortex Tube Sand Trap," A. R. Robinson (with discussion), III:391:3371.

WATER GATES, MOVABLE
"Vibration of Gates During Overflow and Underflow," Eduard Naudascher, I:384:3314.

WATER SUPPLY (General)
"Investigation on the Corrosive Behavior of Waters," Werner Stumm (with discussion), III:1:3280.
"Method for Estimating Consumptive Use of Water for Agriculture," Wendell C. Munson (with discussion), III:200:3331.
"Predicting Storm Runoff on Small Experimental Watersheds," Neal E. Minshall (with discussion), I:625:3333.
"Some Legal Aspects of Sedimentation," C. E. Busby (with discussion), I:1008:3361.
"Water Balance Recorder," Hans C. Aslyng and Knud J. Kristensen (with discussion), III:132:3305.

WATER TRANSPORTATION
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.

WATER TREATMENT
"Investigation on the Corrosive Behavior of Waters," Werner Stumm (with discussion), III:1:3280.

WATERWAYS (General)
"Cathodic Protection of Marine Terminal Facilities," Joseph Milano, IV:329:3348.
"Design and Stability Considerations for Unique Pier," James Michalos and David P. Billington (with discussion), IV:396:3358.
"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.
"Economics of River Bank Stabilization," Charles Senour (with discussion), IV:346:3356.
"Hurricane Winds for Design Along the New England Coast," C. S. Gilman and V. A. Myers, IV:59:3295.
"Latest Dredging Practice," Ole P. Erickson (with discussion), IV:1:3281.
"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.
"Pneumatic Barrier Against Salt Water Intrusion," Ian Larsen (with discussion), IV:475:3172.

WATERWAYS (Geographical)
CALIFORNIA
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.

COLUMBIA RIVER
"Prototype Measurements of the Columbia River Estuary," John B. Lockett and Harold A. Kidby, I:75: 3288.
HUDSON RIVER
"Shoaling of the Lower Hudson River," Charles M. Duke, IV:275: 3332.
MISSISSIPPI RIVER
"Hydraulics of Southwest Pass, Mississippi River," Chester A. Peyronnin, Jr., I:752:3341.
NEW ENGLAND
"Behavior of Beach Fills in New England," Harry S. Perdikis (with discussion), IV:292:3337.
TEXAS
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.

WAVES
"Attenuation of Stress Waves in Bi-Linear Materials," Richard Skalak and Paul Weidlinger, I:352: 3312.
"Behavior of Beach Fills in New England," Harry S. Perdikis (with discussion), IV:292:3337.
"Design Considerations for California Marinas," James W. Dunham (with discussion), IV:131:3309.
"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.
"Design of Inlets for Texas Coastal Fisheries," H. P. Carothers and Homer C. Innis (with discussion), IV:231:3323.
"Dynamic Testing of Pavements," W. Heukelom and C. R. Foster (with discussion), I:425:3319.
"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," Melvin L. Baron and Charles Lecht, I:802: 3346.
"Impact Waves in Sand (Symposium)," Blaine R. Parkin (with discussion), I:1270:3378.
"Mean Direction of Waves and of Wave Energy," Omar J. Lillevang (with discussion), IV:193:3316.
"Prediction of Cavitation Damage," N. S. Govinda Rao and A. Thiruvengadam, I:309:3308.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Theory of Wave Agitation in a Harbor," Bernard Le Méhauté, I: 364:3313.
"Vibration Problems in Hydraulic Structures," Frank B. Campbell (with discussion), I:1:3282.
"Water Eddy Forces on Oscillating Cylinders," Alan D. K. Laird, Charles A. Johnson, and Robert W. Walker (with discussion), I:335:3310.

WELDS AND WELDING
"Column Research Council Symposium on Metal Compression Members," Bruce G. Johnston; Thomas C. Kavanagh; H. N. Hill, J. W. Clark, and R. J. Brungraber (with discussion); Lynn S. Beedle and Lambert Tall (with discussion); J. W. Clark and H. N. Hill; R. J. Brungraber and J. W. Clark; J. R. Jombock and J. W. Clark; Robert L. Ketter (with discussion), II:77:3366.
"Penstocks (Symposium)," F. L. Lawton and J. G. Sutherland; Ewald Schmitz (with discussion); Robert Bouchayer (with discussion), III:481: 3390.
"Steel Buildings and Fire Protection in Europe," Curt F. Kollbrunner, II:500:3383.

WELLS
"Aquifer Tests on Partially Penetrating Wells," Mahdi S. Hantush, I:284:3304.
"Drawdown Around a Partially Penetrating Well," Mahdi S. Hantush, I:268:3303.
"Intercepting Drainage Wells in Artesian Aquifer," Dean F. Peterson, Jr. (with discussion), III:32: 3287.

WIND (General)
"Design of Fox Point Hurricane Barrier," Roy S. Martin, IV:89:3301.
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.
"Hurricane Winds for Design Along the New England Coast," C. S. Gilman and V. A. Myers, IV:59:3295.
"Weather Modification (Symposium)," Robert D. Elliott; Wallace E. Howell, III: 327:3354.

WIND PRESSURE
"Correlation of Predicted and Observed Suspension Bridge Behavior," George S. Vincent, II:646:3388.
"Golden Gate Bridge Vibration Studies," George S. Vincent (with discussion), II:667:3389.
"Hurricane Winds for Design Along the New England Coast," C. S. Gilman and V. A. Myers, IV:59:3295.
"Some Aspects of Surface Water Wave Scale Effects," Gerrit Abraham, I:60:3285.
"Wind-Induced Vibrations in Antenna Members," William Weaver, Jr. (with discussion), I:679:3336.
"Wind Stresses in Domes," P. Gondikas and Mario G. Salvadori (with discussion), I:838:3350.

AUTHOR INDEX

(including Memoirs of deceased members)

ABRAHAM, GERRIT
"Some Aspects of Surface Water Wave Scale Effects," I:60:3285.

ADAMS, W. E.
Dsc of "Movements of a Cable Due to Changes in Loading," II:290:3368.

AHMAD, MUSHTAQ
Dsc of "Scour at Bridge Crossings," I:198:3294.
Dsc of "Vortex Tube Sand Trap," III:425:3371.

ALPAN, I.
Dsc of "Foundation Vibrations," I:900:3351.

AMERMAN, C. R.
See J. L. McGuinness, I:763:3343.

AMOROCHO, JAIME
Dsc of "Predicting Storm Runoff on Small Experimental Watersheds," I:646:3333.

APPEL, David W.
Dsc with Charles L. Sanford of "Vibration Problems in Hydraulic Structures," I:19:3282.

ARMENAKAS, ANTHONY E.
See George Herrmann, I:458:3322.

ASLYNG, HANS C.
"Water Balance Recorder," with Knud J. Kristensen, III:132:3305.

ASSUR, A.
Dsc of "Bearing Capacity of Floating Ice Sheets," I:563:3327.

AUGUSTI, GUILIANO
See Bruno Barbarito, II:590:3386.

AYERS, AUGUSTINE HAINES
Memoir of, V:51.

BAKER, A. L. L.
"Ultimate-Load Theory for Concrete Frame Analysis," II:561:3386.

BAKER, JOHN FLEETWOOD
"Plastic Method of Designing Steel Structures," II:597:3387.

BALOG, LOUIS
Dsc of "Golden Gate Bridge Vibration Studies," II:702:3389.

BANDEL, HANNSKARL
Dsc of "Movements of a Cable Due to Changes in Loading," II:288:3368.

BARBARITO, BRUNO
Dsc with Guiliano Augusti of "Ultimate-Load Theory for Concrete Frame Analysis," II:590:3386.

BARBER, EDWARD S.
Dsc of "Seepage Requirements of Filters and Pervious Bases," I:1109:3363.

BARON, MELVIN L.
"Dynamic Elastic-Plastic Analysis of Structures," with Hans H. Bleich and Paul Weidlinger, I:604:3330.
"Elastic Rayleigh Wave Effects Due to Nuclear Blasts," with Charles Lecht, I:802:3346.

BAUER, W. J.
Dsc of "Scour at Bridge Crossings," I:186:3294.

BEEDLE, LYNN S.
"Column Research Council Symposium on Metal Compression Members: Basic Column Strength," with Lambert Tall, II:138:3366.

BEHLKE, CHARLES E.
Dsc of "Latest Dredging Practice," IV:14:3281.

BEICHLEY, G. L.
"Hydraulic Design of Hollow-Jet Valve Stilling Basins," with A. J. Peterka, I:210:3296.

BELL, E. S.
Dsc of "Symposium on Grouting: Construction of Rocky Reach Grouted Cutoff," I:1399:3379.

BENJAMIN, JACK R.
Dsc of "Recent Trends in Ultimate Strength Design," II:228:3373.
Dsc with Theodore C. Zsutty of "Safety, Reliability and Structural Design," II:319:3372.

BERG, GLEN V.
"Response of Multi-Story Structures to Earthquake," I:705:3338.
Dsc of "Static and Dynamic Analysis of Guy Cables," II:402:3375.

BERG, PAUL H.
"Methods of Applying Irrigation Water," III:61:3293.

BERNHARD, R. K.
Dsc of "Dynamic Testing of Pavements," I:451:3319.

BERWANGER, C.
Dsc of "Recent Trends in Ultimate Strength Design," II:339:3373.

BILLINGTON, DAVID P.
See James Michalos, IV:396:3358.

BIRNSTIEL, CHARLES
See James Michalos, II:267:3368.

BISHOP, A. ALVIN
"Relation of Intake Rate to Length of Run in Surface Irrigation," III: 282:3344.

BLACKBURN, JACK B.
"The Civil Engineer and Urban Transportation," IV:80:3299.

BLACKMAN, J. W. B.
Dsc of "Design Considerations for California Marinas," IV:154: 3309.

BLANEY, HARRY F.
Dsc of "Method for Estimating Consumptive Use of Water for Agriculture," III:218:3331.

BLEICH, HANS H.
See Melvin L. Baron, I:604:3330.

BLENCH, T.
Dsc of "Resistance to Flow in Alluvial Channels," I:956:3360.
Dsc of "Scour at Bridge Crossings," I:180:3294.

BLUME, JOHN A.
Dsc of "Dynamic Response of Elasto-Plastic Frames," II:14: 3284.
Dsc of "Response of Multi-Story Structures to Earthquake," I:723: 3338.

BOUCHAYER, ROBERT
"Penstocks (Symposium): Stresses on Anchor Blocks," III:546:3390.

BOUWER, HERMAN
"Variable Head Technique for Seepage Meters," III:434:3376.

BRADLEY, JOSEPH N.
Dsc of "Scour at Bridge Crossings," I:181:3294.

BRIGHT, JOSEPH SHIRLEY
Memoir of, V:51.

BROOKS, NORMAN H.
See R. Hugh Taylor, Jr., I:982: 3360.

BROTTON, D. M.
Dsc with N. W. Williamson and M. Millar of "Movements of a Cable Due to Changes in Loading," II:283:3368.

BROWNFIELD, A. H.
Dsc of "Static and Dynamic Analysis of Guy Cables," II:408:3375.

BRUNGRABER, R. J.
"Column Research Council Symposium on Metal Compression Members: Strength of Welded Aluminum Columns," with J. W. Clark, II:202:3366.
See H. N. Hill, II:102:3366.

BRUSH, LUCIEN M., JR.
Dsc of "Resistance to Flow in Alluvial Channels," I:992:3360.

BRUUN, PER
Dsc of "Mean Direction of Waves and of Wave Energy," IV:216:3316.

BURKEY, CHARLES ROGY
Memoir of, V:52.

BUSBY, C. E.
"Some Legal Aspects of Sedimentation," I:1007:3361.

CAMP, THOMAS R.
"Chlorination of Mixed Sewage and Storm Water," III:452:3335.

CAMPBELL, FRANK B.
"Vibration Problems in Hydraulic Structures," I:1:3282.

CARLE, NATHANIEL ALLEN
Memoir of, V:53.

CAROTHERS, H. P.
"Design of Inlets for Texas Coastal Fisheries," with Homer C. Innis, IV:231:3323.

CARPENTER, J C
Memoir of, V:54.

CEDERGREN, HARRY R.
"Seepage Requirements of Filters and Pervious Bases," I:1090:3363.

CHANG, I. C.
See E. F. Masur, I:736:3339.

CHELLIS, ROBERT D.
Dsc with Arthur F. Zaskey of "Pile-Driving Analysis by the Wave Equation," I:1181:3306.

CHITALE, S. V.
Dsc of "Scour at Bridge Crossings," I:191:3294.

CLARK, J. W.
"Column Research Council Symposium on Metal Compression Members: Lateral Buckling of Beams," with H. N. Hill, II:180:3366.
See H. N. Hill, II:102:3366.
See J. R. Jombock, II:227:3366.
See R. J. Brungraber, II:202:3366.

CLAY, C. H.
Dsc of "Model and Prototype Research on Fish Ladders," III:232:3359.

COATES, D. F.
Dsc of "Dynamic Testing of Pavements," I:452:3319.
Dsc of "Foundation Vibrations," I:898:3351.

COLLINS, ARTHUR L.
Dsc of "Latest Dredging Practice," IV:21:3281.

COPEN, MERLIN D.
"Design of Arch Dams by Trial Load Method of Analysis," III:236:3340.
Dsc of "Italian Arch Dam Design and Model Confirmation," II:495:3382.

CORNFIELD, G. M.
Dsc of "Pile-Driving Analysis by the Wave Equation," I:1179:3306.

CRAWFORD, IVAN CHARLES
Memoir of, V:55.

DANIEL, I. M.
See A. J. Durelli, II:39:3321.

DAVENPORT, A. G.
Dsc of "Static and Dynamic Analysis of Guy Cables," II:406:3375.

DAVIS, RAYMOND E.
"Symposium on Grouting: Foreword," I:1338:3379.

DAVISSON, M. T.
See R. B. Peck, IV:413:3358.

DEAN, DONALD L.
"Static and Dynamic Analysis of Guy Cables," II:382:3375.

DEB, ARUN KUMAR
Dsc of "Filtration Using Radioactive Algae," III:386:3355.

del VALLE-RIVERA, LUIS A.
See James M. Symons, III:43:3290.

DERRICK, CLARENCE J.
Dsc of "Periods of Framed Buildings for Earthquake Analysis," I:675:3334.

DeWIEST, ROGER J. M.
"Free Surface Flow in Homogeneous Porous Medium," I:1045:3362.

DICK, T. M.
Dsc of "Pneumatic Barrier Against Salt Water Intrusion," IV: 487:3172.

DICKER, DANIEL
Dsc of "Free Surface Flow in Homogeneous Porous Medium," I:1085:3362.

DONNELL, L. H.
See E. F. Masur, I:736:3339.

DOUGAL, MERWIN D.
Dsc of "Predicting Storm Runoff on Small Experimental Watersheds," I:652:3333.

DUKE, CHARLES M.
"Shoaling of the Lower Hudson River" IV:275:3332.

DUNHAM, JAMES W.
"Design Considerations for California Marinas," IV:131:3309.
Dsc of "Mean Direction of Waves and of Wave Energy," IV:214:3316.

DURELLI, A. J.
"Structural Model Analysis by Means of Moiŕe Fringes," with I. M. Daniel, II:39:3321.
See C. A. Sciammarella, I:582: 3329.

DURKEE, JACKSON L.
Dsc of "Movements of a Cable Due to Changes in Loading," II:291: 3368.

EARNEST, G. BROOKS
"The Sky's No Longer the Limit—But . . .," Annual Address at the Conference, Omaha, Nebraska, May 16, 1962, V:40:3391.

EFSTRATIADIS, GREGORY D.
Dsc of "Methods of Applying Irrigation Water," III:72:3293.

EHRLER, O. M. CHRISTOF
Dsc of "Dynamic Testing of Pavements," I:454:3319.

EINSTEIN, H. A.
Esc of "Resistance to Flow in Alluvial Channels," I:954:3360.

ELLIOTT, ROBERT D.
"Weather Modification (Symposium): Seeding of West Coast Winter Storms," III:329:3354.

ELSTON, JUDSON P.
Dsc of "Symposium on Grouting: Construction of Rocky Reach Grouted Cutoff," I:1397:3379.
Dsc of "Symposium on Grouting: Research in Foundation Grouting with Cement," I:1364:3379.

EREMIN, A. A.
Dsc of "Dynamic Elastic-Plastic Analysis of Structures," I:623: 3330.
Dsc of "Dynamic Response of Elasto-Plastic Frames," II:14:3284.
Dsc of "Dynamic Testing of Pavements," I:453:3319.
Dsc of "Foundation Vibrations," I:906:3351.
Dsc of "Periods of Framed Buildings for Earthquake Analysis," I: 676:3334.
Dsc of "Pile-Driving Analysis by the Wave Equation," I:1179:3306.
Dsc of "Recent Trends in Ultimate Strength Design," II:346:3373.
Dsc of "Runway Roughness Studies in the Aeronautical Field," IV:447: 3364.
Dsc of "Stability Considerations in the Design of Steel Columns," II: 555:3385.
Dsc of "Stability Considerations in the Design of Steel Plate Girders," II:447:3380.

ERICKSON, OLE P.
"Latest Dredging Practice," IV: 1:3281.

ERICKSON, SWAN ARTHUR
Memoir of, V:56.

FEHRMAN, R. G.
See K. S. Lane, I:492:3325.

FENVES, STEVEN J.
Dsc of "Analysis of Structures by Combining Redundants," II:364: 3374.

FERGUSON, PHIL M.
"Recent Trends in Ultimate Strength Design," II:324:3373.

FIERING, MYRON B.
"Queuing Theory and Simulation in Reservoir Design," I:1114:3367.

FISCHER, J. A.
See V. A. Smoots, I:908:3351.

FISCHERSTRÖM, N. CLAES H.
"Low Pressure Aeration of Water and Sewage," III:75:3297.

FISHER, JOHN W.
Dsc of "Column Research Council Symposium on Metal Compression Members: Basic Column Strength," with Ivan M. Viest, II:173:3366.

FOSTER, C. R.
See W. Heukelom, I:425:3319.

FREUDENTHAL, A. M.
"Safety, Reliability and Structural Design," II:304:3372.

FRIBERG, BENGT F.
Dsc of "LTS Design of Continuously Reinforced Concrete Pavement," IV:384:3357.

FULLER, ALMON HOMER
Memoir of, V:56.

FULLER, BERNARD R.
Memoir of, V:57.

FULTON, REX H.
Memoir of, V:58.

FULTON, ROBERT E.
Dsc of "Impact Waves in Sand (Symposium): Theory Compared with Experiments on Sand Columns," with A. J. Hendron, Jr., I:1301:3378.

GALAMBOS, THEODORE V.
Dsc of "Stability Considerations in the Design of Steel Columns," II:556:3385.

GAMBLE, RALEIGH WELCH
Memoir of, V:59.

GÁNCZARCZYK, JERZY
Dsc of "Low Pressure Aeration of Water and Sewage," III:110:3297.

GATES, MARVIN
Dsc of "Pile-Driving Analysis by the Wave Equation," I:1174:3306.

GELLERT, NATHAN HENRY
Memoir of, V:59.

GERRITSEN, F.
Dsc of "Design of Inlets for Texas Coastal Fisheries," IV:257:3323.

GERSTLE, KURT H.
See Peter P. Gillis, II:349:3374.

GIBBS, H. J.
Dsc of "Seepage Requirements of Filters and Pervious Bases," I:1110:3363.

GILLFILLAN, WALTER E.
"Airplane Performance and the Small Airport," IV:221:3320.

GILLIS, PETER P.
"Analysis of Structures by Combining Redundants," with Kurt H. Gerstle, II:349:3374.

GOLD, L. W.
Dsc of "Bearing Capacity of Floating Ice Sheets," I:557:3327.

GONDIKAS, P.
"Wind Stresses in Domes," with Mario G. Salvadori, I:838:3350.

GOODRICH, RALPH DICKINSON
Memoir of, V:60.

GILMAN, C. S.
"Hurricane Winds for Design Along the New England Coast," with V. A. Myers, IV:59:3295.

GIRAND, JAMES
Dsc of "Investigation on the Corrosive Behavior of Waters," III:20:3280.

GOULD, PHILLIP L.
Dsc of "Analysis of Structures by Combining Redundants," II:370: 3374.
Dsc of "Column Research Council Symposium on Metal Compression Members: Further Studies of the Strength of Beam-Columns," II: 260:3366.

GOVINDA RAO, N. S.
"Prediction of Cavitation Damage," with A. Thiruvengadam, I: 309:3308.

GREGORY, M.
Dsc of "Recent Trends in Ultimate Strength Design," II:343:3373.

GULICK, LUTHER
"Observations on Urban Transporation," IV:260:3326.

HAFTERSON, HAROLD D.
Dsc of "Method for Estimating Consumptive Use of Water for Agriculture," III:217:3331.

HALLMARK, DASEL E.
Dsc of "Resistance to Flow in Alluvial Channels," I:970:3360.

HAMMOND, LEWIS MERRICK
Memoir of, V:61.

HANTUSH, MAHDI S.
"Aquifer Tests on Partially Penetrating Wells," I:284:3304.
"Drawdown Around a Partially Penetrating Well," I:268:3303.
Dsc of "Intercepting Drainage Wells in Artesian Aquifer," III:39: 3287.

HAPP, STAFFORD C.
Dsc of "Tuttle Creek Dam of Rolled Shale and Dredged Sand," I:516:3325.

HARDIN, BOBBY OTT
Dsc of "Foundation Vibrations," I:906:3351.

HARDING, K. G.
Dsc with N. S. Trahair of "Italian Arch Dam Design and Model Confirmation," II:497:3382.

HARGREAVES, GEORGE H.
Dsc of "Method for Estimating Consumptive Use of Water for Agriculture," III:213:3331.

HARR, MILTON E.
Dsc of "Unsteady Flow of Ground Water into a Surface Reservoir," I:415:3317.

HARROLD, LLOYD L.
Dsc of "Water Balance Recorder," III:138:3305.
See J. L. McGuinness, I:763:3343.

HARTZ, B. J.
Dsc of "Analysis of Structures by Combining Redundants," II:368: 3374.

HAUSHILD, WILLIAM
"Unsteady Flow of Ground Water into a Surface Reservoir," with Gordon Kruse, I:408:3317.

HAYTHORNTHWAITE, R. M.
"Range of Yield Condition in Ideal Plasticity," I:1252:3377.

HEER, EWALD
See Mario G. Salvadori, I:660: 3334.

HEIDINGER, F.
Dsc of "Penstocks (Symposium): Multi-Layer Penstocks and High-Pressure Wyes," III:544:3390.

HENDRON, A. J., JR.
See Robert E. Fulton, I:1301: 3378.

HERBICH, JOHN B.
Dsc of "Latest Dredging Practice," IV:17:3281.

HERRMANN, GEORGE
"Vibrations and Stability of Plates Under Initial Stress," with Anthony E. Armenakas, I:458:3322.

HEUKELOM, W.
"Dynamic Testing of Pavements," with C. R. Foster, I:425:3319.

HILL, H. N.
"Column Research Council Symposium on Metal Compression Members: Design of Welded Aluminum Structures," with J. W.

Clark and R. J. Brungraber, II:102:3366.
See J. W. Clark, II:180:3366.

HILL, RAY EWALL
Memoir of, V:62.

HOPKINS, H. G.
Dsc of "Bearing Capacity of Floating Ice Sheets," I:557:3327.
Dsc of "Impact Waves in Sand (Symposium): Theory Compared with Experiments on Sand Columns," I:1301:3378.

HORONJEFF, ROBERT
"Location and Number of Exit Taxiways," IV:29:3286.

HOUBOLT, JOHN C.
"Runway Roughness Studies in the Aeronautical Field," IV:427:3364.

HOWARD, BERNE M.
Memoir of, V:62.

HOWELL, WALLACE E.
"Weather Modification (Symposium): Seeding of Clouds in Tropical Climates," III:349:3354.

HRENNIKOFF, A.
Dsc of "Plastic Method of Designing Steel Structures," II:630:3387.

HSU, H. Y.
See E. Roy Tinney, I:31:3283.

HUMAN, THEODORE
Memoir of, V:63.

HUME, N. B.
See R. J. Theroux, III:172:3324.

INNIS, HOMER C.
See H. P. Carothers, IV:231:3323.

IVES, KENNETH J.
"Filtration Using Radioactive Algae," III:372:3355.

IYENGAR, K. T. SUNDARA RAJA
Dsc of "Unsteady Flow of Ground Water into a Surface Reservoir," I:421:3317.

JACQUES, HENRY L.
Memoir of, V:64.

JANISZEWSKI, TADEUSZ
Dsc of "Movements of a Cable Due to Changes in Loading," II:282:3368.

JENCKS, CARLTON E.
See David M. Rockwood, I:129:3292.

JERABEK, DANIEL ALFRED
Memoir of, V:65.

JOGLEKAR, D. V.
Dsc of "Scour at Bridge Crossings," I:183:3294.

JOHNSON, CHARLES A.
See Alan D. K. Laird, I:335:3310.

JOHNSON, J. W.
Dsc of "Some Legal Aspects of Sedimentation," I:1037:3361.

JOHNSTON, BRUCE G.
"Column Research Council Symposium on Metal Compression Members: Foreword," II:78:3366.

JOMBOCK, J. R.
"Column Research Council Symposium on Metal Compression Members: Postbuckling Behavior of Flat Plates," with J. W. Clark, II:227:3366.

JONAS, E.
Dsc of "Pile-Driving Analysis by the Wave Equations," I:1177:3306.

JONES, BEN A., JR.
See Robert L. McFall, I:655:3333.

JORDAAN, J. M., JR.
Dsc of "Mean Direction of Waves and of Wave Energy," IV:217:3316.

KAVANAGH, THOMAS C.
"Column Research Council Symposium on Metal Compression Members: Effective Length of Framed Columns," II:81:3366.

KAZMANN, RAPHAEL G.
Dsc of "Unsteady Flow of Ground Water into a Surface Reservoir," I:417:3317.

KENNEDY, THOMAS B.
"Symposium on Grouting: Research in Foundation Grouting with Cement," I:1339:3379.

KENNISON, HUGH F.
"Tests on Prestressed Concrete Embedded Cylinder Pipe," I:246:3300.

KETTER, ROBERT L.
"Column Research Council Symposium on Metal Compression Members: Further Studies of the Strength of Beam-Columns," II:244:3366.

KIDBY, HAROLD A.
See John B. Lockett, I:75:3288.

KILLAM, CHARLES WILSON
Memoir of, V:65.

KINGSOLVER, JOSEPH BACHMAN
Memoir of, V:66.

KNAPIK, EDWARD MATHIAS
Memoir of, V:67.

KOBOLD, F.
"Measurement of Displacement and Deformation by Geodetic Methods," IV:163:3311.

KOLLBRUNNER, CURT F.
"Steel Buildings and Fire Protection in Europe," II:500:3383.

KOWTKO, DONALD
"Meaning of the Professional License to Engineers," V:1:3352.

KRISTENSEN, KNUD J.
See Hans C. Aslyng, III:132:3305.

KRUSE, GORDON
See William Haushild, I:408:3317.

LAFLIN, ELI FORBES
Memoir of, V:67.

LAIRD, ALAN D. K.
"Water Eddy Forces on Oscillating Cylinders," with Charles A. Johnson and Robert W. Walker, I:335:3310.

LANE, K. S.
"Tuttle Creek Dam of Rolled Shale and Dredged Sand," with R. G. Fehrman, I:492:3325.

LANGBEIN, W. B.
See Thomas Maddock, Jr., I:972:3360.

LARRISON, GEORGE KIRKPATRICK
Memoir of, V:68.

LARSEN, IAN
"Pneumatic Barrier Against Salt Water Intrusion," IV:475:3172.

LAURSEN, EMMETT M.
"Scour at Bridge Crossings," I:166:3294.
Dsc with Gerald A. Zernial of "Resistance to Flow in Alluvial Channels," I:963:3360.

LAWRANCE, CHARLES H.
"Sanitary Considerations of Five-Mile Ocean Outfall," III:294:3349.
See R. J. Theroux, III:172:3324.

LAWTON, F. L.
"Penstocks (Symposium): Kemano Pressure Conduit Engineering Investigations," with J. G. Sutherland, III:483:3390.

LECHT, CHARLES
See Melvin L. Baron, I:802:3346.

LEDBETTER, WILLIAM B.
See Benjamin F. McCullough, IV:358:3357.

LEE, DONOVAN H.
Dsc of "Column Research Council Symposium on Metal Compression Members: Basic Column Strength," II:172:3366.

Le MÉHAUTÉ, BERNARD
"Theory of Wave Agitation in a Harbor," I:364:3313.

LIESSNER, W. C.
See D. H. Pletta, I:776:3345.

LILLEVANG, OMAR J.
"Mean Direction of Waves and of Wave Energy," IV:193:3316.
Dsc of "Design Considerations for California Marinas," IV:159:3309.

LIND, N. C.
Dsc with S. T. Wright of "Bearing Capacity of Floating Ice Sheets," I:562:3327.

LOCKETT, JOHN B.
"Prototype Measurements of the Columbia River Estuary," with Harold A. Kidby, I:75:3288.

LORSCH, HAROLD G.
Dsc of "Analysis of Structures by Combining Redundants," II:367:3374.

LUSS, EDUARD
Dsc of "Column Research Council Symposium on Metal Compression Members: Design of Welded Aluminum Structures," II:126:3366.

MACAGNO, ENZO OSCAR
"Interfacial Mixing in Stratified Flow," with Hunter Rouse, I:102:3289.

MACKRLE, SVATOPLUK
See Vladimir Mackrle, III:266:3342.

MACKRLE, VLADIMIR
"Adhesion in Filters," with Svatopluk Mackrle, III:266:3342.

MacLEAN, BERTON M.
"Model and Prototype Research on Fish Ladders," III:221:3359.

MADDOCK, THOMAS, JR.
Dsc with W. B. Langbein of "Resistance to Flow in Alluvial Channels," I:972:3360.

MARTIN, ROY S.
"Design of Fox Point Hurricane Barrier," IV:89:3301.

MASSONNET, CHARLES E.
"Stability Considerations in the Design of Steel Columns," II:525:3385.
"Stability Considerations in the Design of Steel Plate Girders," II:420:3380.

MASUR, E. F.
"Stability of Frames in the Presence of Primary Bending Moments," with I. C. Chang and L. H. Donnell, I:736:3339.
Dsc of "Vibrations and Stability of Plates Under Initial Stress," I:487:3322.

MATHIS, S. J.
"Marine Foundation Construction in Oil Fields," II:18:3298.

MATLOCK, HUDSON
"Generalized Solutions for Laterally Loaded Piles," with Lymon C. Reese, I:1220:3370.

McCLURG, VERNE O.
Memoir of, V:69.

McCULLOUGH, BENJAMIN F.
"LTS Design of Continuously Reinforced Concrete Pavement," with William B. Ledbetter, IV:358:3357.

McFALL, ROBERT L.
Dsc with Ben A. Jones, Jr., of "Predicting Storm Runoff on Small Experimental Watersheds," I:655:3333.

McGUINNESS, J. L.
"Hydrogeologic Nature of Streamflow on Small Watersheds," with L. L. Harrold and C. R. Amerman, I:763:3343.

MERKLE, JOHN G.
Dsc of "Recent Trends in Ultimate Strength Design," II:340:3373.

MEYER, ADOLF A.
Dsc of "Design of Arch Dams by Trial Load Method of Analysis," III:252:3340.

MEYERHOF, G. G.
"Bearing Capacity of Floating Ice Sheets," I:524:3327.

MICHALOS, JAMES
"Design and Stability Considerations for Unique Pier," with David P. Billington, IV:396:3358.
"Movements of a Cable Due to Changes in Loading," with Charles Birnstiel, II:267:3368.

MILANO, JOSEPH
"Cathodic Protection of Marine Terminal Facilities," IV:329:3348.

MILLAR, M.
See D. M. Brotton, II:283:3368.

MILLER, R. P.
See S. D. Wilson, I:913:3351.

MINSHALL, NEAL E.
"Predicting Storm Runoff on Small Experimental Watersheds," I:625:3333.

MITCHELL, R. A.
See William Zuk, IV:382:3357.

MOODY, W. T.
Dsc of "Unsteady Flow of Ground Water into a Surface Reservoir," I:417:3317.

MORSE, STANLEY
Dsc of "Moiŕe Fringes as a Means of Analyzing Strains," I:601:3329.

MULLANEY, HOWARD J.
Dsc of "Economics of River Bank Stabilization," IV:355:3356.

MUNSON, WENDELL C.
"Method for Estimating Consumptive Use of Water for Agriculture," III:200:3331.

MURPHY, PATRICK EMMETT
Memoir of, V:69.

MYERS, V. A.
See C. S. Gilman, IV:59:3295.

NAUDASCHER, EDUARD
"Vibration of Gates During Overflow and Underflow," I:384:3314.

NEWLON, HOWARD, JR.
See William Zuk, IV:382:3357.

NEWMARK, NATHAN M.
"A Method of Computation for Structural Dynamics," I:1406:3384.

OAKLEY, ROBERT ETHAN
Memoir of, V:70.

OBERTI, GUIDO
"Italian Arch Dam Design and Model Confirmation," II:471:3382.

OJALVO, MORRIS
Dsc of "Column Research Council Symposium on Metal Compression Members: Further Studies of the Strength of Beam-Columns," II:261:3366.
Dsc of "Plastic Method of Designing Steel Structures," II:635:3387.

OSPINA, CARLOS S.
Dsc of "Penstocks (Symposium): Multi-Layer Penstocks and High-Pressure Wyes," III:545:3390.

PARKIN, BLAINE R.
"Impact Waves in Sand (Symposium): Implications of an Elementary Theory," I:1320:3378.
"Impact Waves in Sand (Symposium): Theory Compared with Experiments on Sand Columns," I:1270:3378.

PARMAKIAN, JOHN
Dsc of "Vibration Problems in Hydraulic Structures," I:17:3282.

PECK, R. B.
Dsc with M. T. Davisson of "Design and Stability Considerations for Unique Pier," IV:413:3358.

PEIRCE, WALTER ANDERSON
Memoir of, V:71.

PENNER, F.
See G. Y. Sebastyan, I:567:3327.

PENZIEN, JOSEPH
"Dynamic Response of Elasto-Plastic Frames," II:1:3284.

PERDIKIS, HARRY S.
"Behavior of Beach Fills in New England," IV:292:3337.

PERRI, JOSEPH G.
Dsc of "Foundation Vibrations," I:902:3351.

PETERKA, A. J.
See G. L. Beichley, I:210:3296.

PETERS, SIMON
Dsc of "Penstocks (Symposium): Stresses on Anchor Blocks," III: 584:3390.

PETERSON, DEAN F., JR.
"Intercepting Drainage Wells in Artesian Aquifer," III:32:3287.

PEYRONNIN, CHESTER A., JR.
"Hydraulics of Southwest Pass, Mississippi River," I:752:3341.

PIERCE, JACK W.
"Fundamentals of Cathodic Protection," IV:114:3307.

PLETTA, D. H.
"Analysis of Noncoplanar Elastic Rings," with W. C. Liessner and Yen-Ming Yeh, I:776:3345.
Dsc with J. H. Sword of "Structural Model Analysis by Means of Moire Fringes, II:49:3321.

RAYNER, A. C.
Dsc of "Behavior of Beach Fills in New England," IV:327:3337.

REESE, LYMON C.
See Hudson Matlock, I:1220:3370.

RICHARDSON, E. V.
See Daryl B. Simons, I:927:3360.

RICHART, F. E., JR.
"Foundation Vibrations," I:863: 3351.

RIGGS, H. C.
Dsc of "Forecasting River Runoff by Coastal Flow Index," I:156:3292.

RITTER, J. B.
"Blending Natural Earth Deposits for Least Cost," with L. R. Shaffer, II:54:3328.

ROBERTS, PALMER W.
Dsc of "Design and Stability Considerations for Unique Pier," IV: 410:3358.

ROBINSON, A. R.
"Vortex Tube Sand Trap," III:391: 3371.

ROBY, HARRISON GEORGE
Memoir of, V:72.

ROCKWOOD, DAVID M.
"Forecasting River Runoff by Coastal Flow Index," with Carlton E. Jencks, I:129:3292.

ROMITA, PIER LUIGI
Dsc of "Scour at Bridge Crossings," I:206:3294.

ROSENBLUETH, E.
Dsc of "A Method of Computation for Structural Dynamics," I:1433: 3384.

ROUSE, HUNTER
See Enzo Oscar Macagno, I:102: 3289.

SACKMAN, J. L.
"Uniformly Moving Load on a Layered Half Plane," I:823:3347.

SALVADORI, MARIO G.
"Periods of Framed Buildings for Earthquake Analysis," with Ewald Heer, I:660:3334.
See P. Gondikas, I:838:3350.

SANFORD, CHARLES L.
See David W. Appel, I:10:3282.

SARKARIA, G. S.
Dsc of "Design of Arch Dams by Trial Load Method of Analysis," III:254:3340.
Dsc of "Digital Computers for Trial-Load Analysis of Arch Dams," III:127:3302.

SAVILLE, CALEB MILLS
Memoir of, V:72.

SCHMITZ, EWALD
"Penstocks (Symposium): Multi-Layer Penstocks and High-Pressure Wyes," III:515:3390.

SCIAMMARELLA, C. A.
"Moiré Fringes as a Means of Analyzing Strains," with A. J. Durelli, I:582:3329.

SCRIVNER, L. R.
"Digital Computers for Trial-Load Analysis of Arch Dams," III:116:3302.

SEBASTYAN, G. Y.
Dsc with F. Penner of "Bearing Capacity of Floating Ice Sheets," I:567:3327.

SELIG, E. T.
Dsc of "Impact Waves in Sand (Symposium): Theory Compared with Experiments on Sand Columns," with E. Vey, I:1305:3378.

SENOUR, CHARLES
"Economics of River Bank Stabilization," IV:346:3356.

SEUFER, P. E.
Dsc of "Chlorination of Mixed Sewage and Storm Water," III:474:3335.

SHAFFER, L. R.
See J. B. Ritter, II:54:3328.

SIMONS, DARYL B.
"Resistance to Flow in Alluvial Channels," with E. V. Richardson, I:927:3360.

SKALAK, RICHARD
"Attenuation of Stress Waves in Bi-Linear Materials," with Paul Weidlinger, I:352:3312.

SMITH, BENJAMIN F.
"Studies for the Lower Monumental Power Plant," III:153:3318.

SMITH, CHESTER ALEXANDER
Memoir of, V:73.

SMITH, E. A. L.
"Pile-Driving Analysis by the Wave Equation," I:1145:3306.

SMITH, PHILLIP R.
Dsc of "Water Eddy Forces on Oscillating Cylinders," I:349:3310.

SMITH, ROY ELMER
Memoir of, V:74.

SMOOTS, V. A.
Dsc with J. F. Stickel and J. A. Fischer of "Foundation Vibrations," I:908:3351.

SODERBERG, L. O.
Dsc of "Pile-Driving Analysis by the Wave Equation," I:1171:3306.

SORENSEN, ALF H.
Dsc of "Latest Dredging Practice," IV:19:3281.

STAFFORD, PAUL H.
"Airport Design by Economic Analysis," with Martin A. Warskow, IV:449:3365.

STAVSKY, YEHUDA
"Bending and Stretching of Laminated Aeolotropic Plates," I:1194:3369.

STICKEL, J. F.
See V. A. Smoots, I:908:3351.

STREETER, HAROLD WARNER
Memoir of, V:75.

STUMM, WERNER
"Investigation on the Corrosive Behavior of Waters," III:1:3280.

SU, H. L.
Dsc of "Plastic Method of Designing Steel Structures," II:638:3387.

SUTHERLAND, J. G.
See F. L. Lawton, III:483:3390.

SUTHERLAND, R. J.
Dsc of "Airport Design by Economic Analysis," IV:472:3365.

SWIGER, W. F.
"Symposium on Grouting: Construction of Rocky Reach Grouted Cutoff," I:1370:3379.

SWORD, J. H.
See D. H. Pletta, II:49:3321.

SYMONS, JAMES M.
"Metabolism of Organic Sulfonates by Activated Sludge," with Luis A. del Valle-Rivera, III:43:3290.

TALL, LAMBERT
See Lynn S. Beedle, II:138:3366.

TAYLOR, I. J.
Dsc of "LTS Design of Continuously Reinforced Concrete Pavement," IV:391:3357.

TAYLOR, R. HUGH, JR.
Dsc with Norman H. Brooks of "Resistance to Flow in Alluvial Channels," I:982:3360.

THEROUX, R. J.
"Removal of Floatables from Digested Sludge," with C. H. Lawrance and N. B. Hume, III:172:3324.

THIRUVENGADAM, A.
See N. S. Govinda Rao, I:309:3308.

THOMAS, A. RYLANDS
Dsc of "Scour at Bridge Crossings," I:196:3294.

THÜRLIMAN, BRUNO
"New Aspects Concerning Inelastic Instability of Steel Structures," II:448:3381.

TICHÝ, MILÍK
Dsc with Milos Vorlíček of "Ul- "Ultimate-Load Theory for Concrete Frame Analysis," II:594:3386.

TINNEY, E. ROY
"Mechanics of Washout of an Erodible Fuse Plug," with H. Y. Hsu, I:31:3283.

TISON, L. J.
Dsc of "Scour at Bridge Crossings," I:188:3294.

TOEBES, GERRIT H.
Dsc of "Wind Stresses in Domes," I:854:3350.

TOLLEFSON, ROGER
"Fisheries Statistics in Evaluating Claims of Pollutions," III:140:3315.

TRAHAIR, N. S.
See K. G. Harding, II:497:3382.

TROY, RICHARD G.
Dsc of "Response of Multi-Story Structures to Earthquake," I:721:3338.

TRUDEAU, ARTHUR G.
"Research for Survival," V:20:3353.

TUEMMLER, FRED W.
"Land Use and Expressways," IV:48:3291.

TURNBULL, W. J.
Dsc of "Seepage Requirements of Filters and Pervious Bases," I:1108:3363.

TURNER, WILLIAM FITZHUGH
Memoir of, V:75.

UPPAL. H. L.
Dsc of "Vibration Problems in Hydraulic Structures," I:24:3282.

VAN SICKLE, DONALD
Dsc of "Water Eddy Forces on Oscillating Cylinders," I:346:3310.

VELTROP, J. A.
Dsc of "Design of Arch Dams by Trial Load Method of Analysis," III:257:3340.

VENSANO, HARRY CHITTENDEN
Memoir of, V:76.

VESIĆ, ALEKSANDAR B.
Dsc of "Generalized Solutions for Laterally Loaded Piles," I:1248:3370.

VEY, E.
See E. T. Selig, I:1305:3378.

VIEST, IVAN M.
See John W. Fisher, II:173:3366.

VINCENT, GEORGE S.
"Correlation of Predicted and Observed Suspension Bridge Behavior," II:646:3388.
"Golden Gate Bridge Vibration Studies," II:667:3389.

VORLÍČEK, MILOS
See Milik Tichy, II:594:3386.

WAGNER, JOHN E.
Dsc of "Symposium on Grouting: Construction of Rocky Reach Grouted Cutoff," I:1399:3379.

WALKER, ROBERT W.
See Alan D. K. Laird, I:335:3310.

WARSKOW, MARTIN A.
See Paul H. Stafford, IV:449:3365.

WEAVER, WILLIAM, JR.
"Wind-Induced Vibrations in Antenna Members," I:679:3336.

WEBER, EMIL AUGUST
Memoir of, V:77.

WEIDLINGER, PAUL
See Melvin L. Baron, I:604:3330.
See Richard Skalak, I:352:3312.

WELLS, JOHN H.
Dsc of "Static and Dynamic Analysis of Guy Cables," II:411:3375.

WENGLER, R. P.
Dsc of "Digital Computers for Trial-Load Analysis of Arch Dams," III:129:3302.

WHITE, MERIT P.
Dsc of "Periods of Framed Buildings for Earthquake Analysis," I:672:3334.

WHITE, ROBERT E.
Dsc of "Symposium on Grouting: Research in Foundation Grouting with Cement," I:1365:3379.

WHITMAN, ROBERT V.
Dsc of "Impact Waves in Sand (Symposium): Theory Compared with Experiments on Sand Columns," I:1308:3378.

WILDER, ELLWOOD COGGESHALL
Memoir of, V:78.

WILLARDSON, LYMAN S.
Dsc of "Relation of Intake Rate to Length of Run in Surface Irrigation," III:288:3344.

WILLIAMS, SYLVESTER V.
Dsc of "Penstocks (Symposium): Multi-Layer Penstocks and High-Pressure Wyes," III:543:3390.

WILLIAMSON, N. W.
See D. M. Brotton, II:283:3368.

WILSON, S. D.
Dsc with R. P. Miller of "Foundation Vibrations," I:913:3351.

WISE, KENNETH W.
Dsc of "Forecasting River Runoff by Coastal Flow Index," I:158:3292.

WISLER, CHESTER OWEN
Memoir of, V:78.

WOOD, R. H.
Dsc of "Bearing Capacity of Floating Ice Sheets," I:561:3327.

WOODARD, SILAS H.
Memoir of, V:79.

WOODRUFF, GLENN B.
Dsc of "Wind-Induced Vibrations in Antenna Members," I:703:3336.

WOODWORTH, RALPH WOGLOM
Memoir of, V:80.

WRIGHT, S. T.
See N. C. Lind, I:562:3327.

YEH, YEN-MING
See D. H. Pletta, I:776:3345.

ZASKEY, ARTHUR F.
See Robert D. Chellis, I:1181:3306.

ZASLAVSKY, DAN
Dsc of "Variable Head Technique for Seepage Meters," III:448:3376.

ZERNIAL, GERALD A.
See Emmett M. Laursen, I:963:3360.

ZSUTTY, THEODORE C.
See Jack R. Benjamin, II:319:3372.

ZUK, WILLIAM
Dsc with Howard Newlon, Jr., and R. A. Mitchell of "LTS Design of Continuously Reinforced Concrete Pavement," IV:382:3357.